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Basin Electric
Power Cooperative
Montana long
range plan

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MONTANA LONG RANGE PLAN

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April 1, 1982

Mr. Leo Berry, Jr., Director
Department of Natural
Resources & Conservation
32 South Ewing
Helena, MT 59601

Dear Mr. Berry:

Pursuant to the provisions of the Major Facility Siting Act and regulations adopted thereunder, Basin Electric Power Cooperative hereby submits its 1982 Long Range Plan.

As noted in the Plan, the Circle, MT, area is one of three preferred locations for a west-side coal-fired generating plant. The other two locations are in Wyoming.

No particular location has been chosen; however, should the Circle, MT, area be identified as the optimum site, Basin Electric looks forward to cooperating with the Department through the siting process.

Enclosed are an original and twelve (12) copies of the plan.

Sincerely,

James L. Grahl

JLG/wrg

Enclosures

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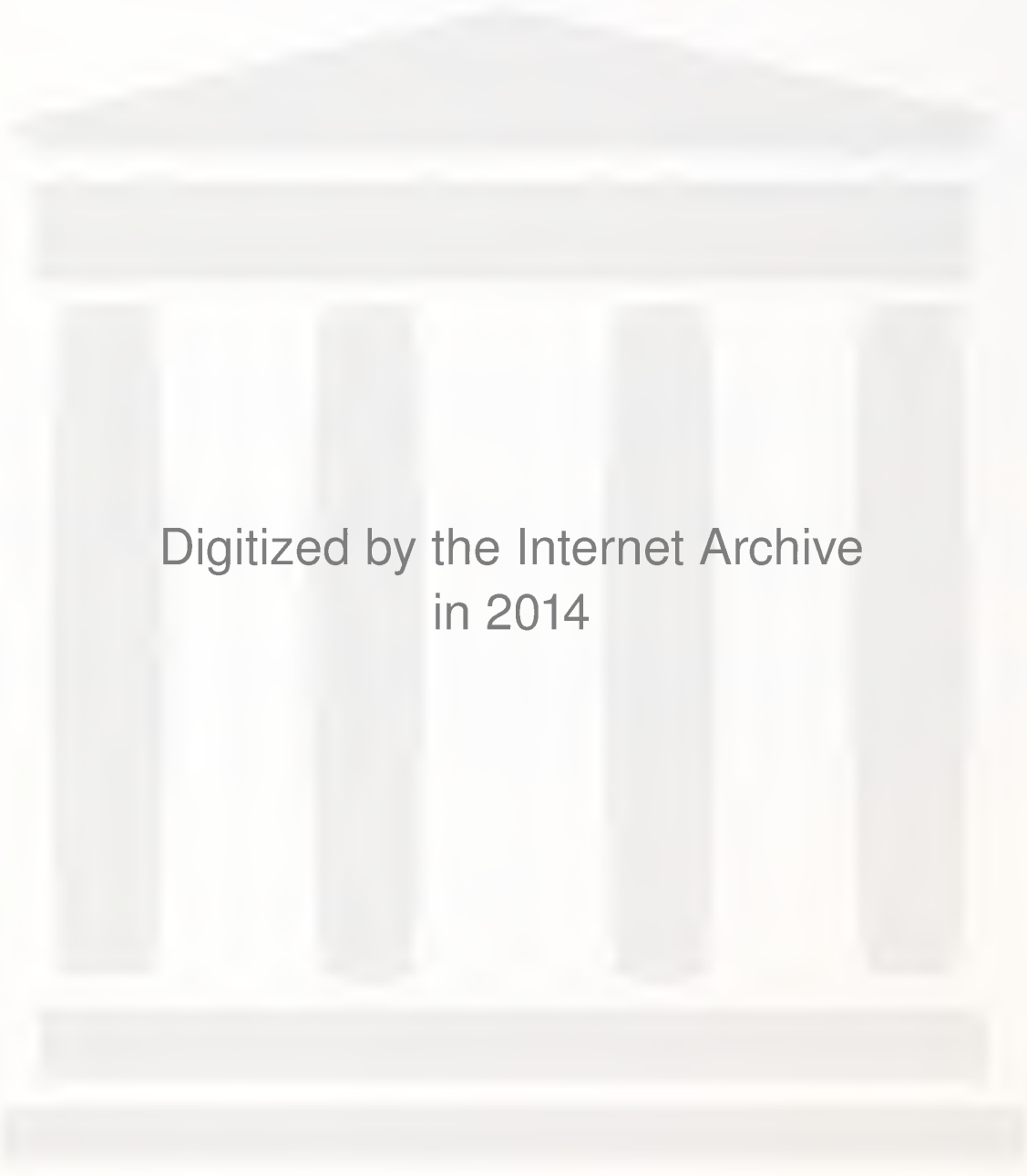
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INTRODUCTION

Basin Electric Power Cooperative, headquartered in Bismarck, ND, is a regional rural electric wholesale power supplier. Basin Electric's service area includes all or portions of eight states: Montana, Wyoming, Colorado, North Dakota, South Dakota, Nebraska, Minnesota and Iowa.

Central Montana Electric G&T Cooperative, Billings, MT, and Upper Missouri G&T Electric Cooperative, Sidney, MT, are two Class A members of Basin Electric. These cooperatives provide electric service for nineteen Montana rural electric distribution cooperatives.

Basin Electric completed a preliminary siting study identifying potential alternative sites for mine-mouth or short-haul, two-unit generating plants utilizing Wyoming, Montana, or North Dakota coals. The architect/ engineering firm of Burns & McDonnell, Inc., Kansas City, MO, conducted the siting study.

The potential sites were evaluated in terms of ultimate generating capacity, fuel cost and quality, cooling and water make-up requirements, socio-economic impacts, power transmission costs, environmental impacts, and other cost and environmental factors.

Because Basin Electric's wholesale power supply obligation includes portions of two major asynchronous electrical systems in the United States, the Cooperative must plan separately for its east-side and west-side wholesale power-supply obligations.

The siting study, therefore, involved a search for two general siting areas, with the west-side study including locations in eastern Montana.

The west-side site would have an ultimate capability of up to 1000 MW and would serve Central Montana G&T and Upper Missouri G&T west-side loads, plus some additional west-side loads of Rushmore Electric Power Cooperative in Wyoming and South Dakota.

Basin Electric is investigating a potential coal and water supply for those areas which appear most favorable. As of April 1, 1982, no one west-side site has been identified as the optimum location. Therefore Basin Electric's response to certain informational requirements in the Montana long-range plan must be regarded as one of the three possibilities presently identified as preferred siting areas.

Basin Electric's preferred areas under study for the construction of up to 1000 (net) MW of generation include the Circle area of Montana, and the Gillette and Arvada/Sheridan county areas of Wyoming.

I

Filing Date For New Applications

Tentative application schedule:

(a) 1982 thru fourth quarter - No application

(b) 1983 first half - Application for a steam-electric power plant and transmission facilities

(c) 1984-1991 -- No applications

II

Description of Tentative Applications

The facility contemplated by the application is a lignite or coal-fueled steam-electric generating plant with attendant transmission lines. The plant would be sized to produce up to 1000 (net) MW of electric power from two generating units of up to 500 (net) MW each.

Basin Electric is presently studying possible methods of meeting its members future power requirements. The preliminary base-load planning and siting study considers various on-line dates for a base load unit on the west side.

We envision the facility would be located in one of three (3) areas being considered in Montana and Wyoming.

The one Montana siting area is near Circle, MT.

Application for a steam electric power plant would include:

(a) The development of a cooling water supply intake, piping and treatment facilities.

(b) The development of a mine to supply approximately 3-6 million tons of fuel per year (depending on the quality of the coal).

(c) The construction of railroad spurs and access roads as required.

(d) The construction of transmission line(s) with terminals to deliver the output of the units to the appropriate points of connection within the regional transmission grid.

(e) The development of housing and related service facilities agreements as required to accomodate construction workers and their families.

(f) The development of housing arrangements as required for permanent employees.

Construction would tentatively commence as early as 1987 and be completed in 1991. These dates may be delayed by two years or more depending upon the results of further studies conducted by Basin Electric.

III

Transmission Lines and Associated Facilities Construction Dates

The generating plant would probably tie in to the existing transmission grid in Montana and Wyoming in order to deliver the power to Basin Electric members.

A tentative date of 1987 is given for commencement of transmission lines and associated substation facility construction with completion in 1991 or when the plant comes on line.

IV

Monthly Average Demand

Basin Electric's 1981 historic demand and energy deliveries to member loads located in Montana are shown in Exhibit A. These loads consist entirely of our deliveries to Upper Missouri G&T Electric Cooperative's Montana load.

No power was delivered to Central Montana Electric G&T Cooperative during 1981.

Basin Electric 1981 Historic Power Supply

Responsibility to Members Montana Load

1981 Demand		1981 Energy	
Jan KW	30,055	Jan MWH	15,378
Feb KW	31,485	Feb MWH	15,679
Mar KW	26,200	Mar MWH	14,819
Apr KW	25,701	Apr MWH	14,409
May KW	24,404	May MWH	12,948
Jun KW	22,969	Jun MWH	12,800
Jul KW	26,624	Jul MWH	12,724
Aug KW	25,927	Aug MWH	13,109
Sep KW	25,790	Sep MWH	14,426
Oct KW	27,651	Oct MWH	13,633
Nov KW	29,029	Nov MWH	14,794
Dec KW	30,487	Dec MWH	17,388
KW Month	326,322	Total MWH	172,107

V

Energy Demand Projections

Exhibits B, C and D, on the following pages, illustrate Basin Electric's projected future power supply responsibility to member loads located within Montana. Exhibit B represents the winter-season peak-demand obligation; Exhibit C represents the summer-season peak-demand obligation; and, Exhibit D represents the annual energy obligation. These projections are based on the members' 1979 preliminary Power Requirement Studies prepared in accordance with the U.S. Department of Agriculture, Rural Electrification Administration Bulletin 120-1. Pages 11 - 18 include the REA Bulletin 120-1 instructions for preparation of Power Requirement Studies.

Basin Electric Projected Power Responsibility

To Members' Montana Load

WINTER (KW)

	Upper Missouri	Central Montana	Total
1982	41,331	5,600	46,931
1983	67,683	14,600	82,283
1984	70,408	4,500	74,908
1985	73,227	6,000	79,227
1986	76,142	7,500	83,642
1987	79,158	9,200	88,358
1988	82,652	10,900	93,552
1989	86,213	18,168	104,381
1990	89,922	27,284	117,206
1991	93,786	36,987	130,773
1992	97,813	47,312	145,125

Basin Electric Projected Power Responsibility

To Members' Montana Load

SUMMER (KW)

	Upper Missouri	Central Montana	Total
1982	26,508	0	26,508
1983	48,601	0	48,601
1984	50,388	390	50,778
1985	52,231	975	53,206
1986	54,130	1,560	55,690
1987	56,317	2,242	58,559
1988	58,469	2,925	61,394
1989	60,804	3,658	64,462
1990	63,231	4,426	67,657
1991	65,756	5,227	70,983
1992	68,381	6,064	74,445

Basin Electric Projected Power Supply Responsibility To Members' Montana Load

ANNUAL ENERGY (MWH)

	Upper Missouri	Central Montana	Total
1982	200,850	13,947	214,797
1983	385,208	26,399	411,607
1984	399,082	12,137	411,219
1985	413,418	17,429	430,847
1986	428,233	22,754	450,987
1987	443,552	28,821	472,373
1988	460,331	34,919	495,250
1989	477,588	55,007	532,595
1990	495,517	79,831	575,348
1991	514,151	106,293	620,444
1992	533,522	134,480	668,002

INSTRUCTIONS FOR THE PREPARATION OF POWER REQUIREMENTS STUDIES

I. Introduction:

A. A Power Requirements Study (PRS) is the study of the specified area of a borrower or a group of borrowers for the purpose of determining:

1. Types and magnitudes of loads.
2. Estimates of future number of consumers by consumer classification, their future KWH consumption and the total power requirements.
3. Magnitude and season of peak KW demand.

B. The purposes of a PRS are to provide the basis for:

1. Construction work plans and for engineering and planning studies relating to the construction or extension of transmission and/or generating facilities to provide adequate power supply.
2. Engineering studies of the present distribution system and adequate design of the future system.
3. Present rate analyses and future rate studies.
4. Estimates of consumers, loads, KWH consumption, power requirements, which can be used to calculate revenues from the sale of electricity, and cost of purchased and/or generated power for financial forecasts and loan feasibility studies.

C. System load forecasting is an empirical process. Load projections are based on specific assumptions that will affect the accuracy of the study. Each borrower should consider its own special needs and requirements in developing or adopting a method for its own use. However, in the interest of consistency in methods and techniques to be used by borrowers in preparing a PRS, REA recommends, as a minimum, the procedures and guidelines outlined in these Instructions.

II. Basic Steps and Related Forms for Developing Power Requirement Studies:
The preparation of Power Requirements Studies as outlined in this Bulletin is based on the following basic procedural steps and related functional forms.

A. Development of Historical Data On Load Growth
The effective development and analysis of accurate and complete data on load growth is an essential first step in the preparation of sound estimates of future power requirements and load characteristics. Generally, historical data for the last 11 years should be developed for this purpose. The following suggested forms (samples attached) are provided to facilitate the development of this required historical data.

1. Form 733a, Supply Substation Data, shows the yearly month-by-month historial data as to metered KW and KWH for each delivery point on the system, and is used for trending of total power requirements. The information is obtained from purchased power bills from each power supplier. Information for each power supplier should be subtotaled and the subtotals should be totaled.

2. Demand curves, showing the total non-coincident KW peak for all delivery points in each month for the most recent three years should be prepared from data shown on Form 733a.

3. Form 342, Substation Summary, presents a yearly summary of the monthly information shown on Form 733a.

4. Form 156, Operating Data - Consumers and Usage, shows additional detailed historical data concerning number of consumers, by classification, and KWH usage which is required for the forecast part of the PRS. The basic data is obtained from Form 7, Financial and Statistical Report.

   For residential, commercial and industrial (50 KVA or less) and public authorities, the average number of consumers shown on this form is the total number of each billed for the 12 months divided by 12. The average monthly usage of these classifications is the total KWH for the 12 months divided by the total number of billed consumers for each of the 12 months.

   For residential-seasonal, irrigation, security lights, public street and highway lighting, and large commercial (over 50 KVA), show the average number of consumers as the largest number in any one of the 12 months of the year. For average usage of these classifications, use the total KWH billed for the year divided by the largest number of consumers in the respective classifications during any one month in the year -- average annual consumption per consumers.

5. Form 5, Annual Operating Data, shows a summary of energy purchases and sales and other historical data. It is used as a part of the basis for developing trends and making the forecasts of future power requirements. The data is derived from Forms 733a, 156, and 7. Other information shown on the form is easily calculated.

B. Mathematical Projections of Historial Data

Borrowers who are members of power-type organizations, when revising a study which will be a part of the organization's study, should refer to part III-A, which assigns the responsibility for making mathematical projections, for the member, to the power organization. Other borrowers, upon completion of the historical load growth tabulation, should develop projections by calculating a curvilinear and/or logarithmic trend of the total energy as shown on the attached worksheets, Mathematical Trends of Power Use. Calculations of the trend should be based on historical KWH input to the system for the past 11 years immediately preceding the revision of the PRS as shown on Forms 733a, 156 and 5. Adjustments to the historical data may be necessary before mathematical projections are made because of abnormal increases or decreases.

C. Development of Final Power Requirements Forecasts

After developing total KW and KWH projections, the borrower will use the following forms, which require in-depth knowledge of the consumers and usage in the area, to develop its final forecast of power requirements.

1. Form 343, Irrigation Projection, is primarily a worksheet for use by systems with irrigation loads to develop the historical data and forecasts for such loads; it provides supporting detail for irrigation loads on Form 736. The historical data is derived partly from Form 7 and partly from the system's records of irrigation loads served. If necessary, the estimate portion of the form should be based upon a current Irrigation Study. A similar form may be used for oil well pumping, if required.

2. Form 345, Request for Individual Consumer Data, also supports Form 736 by showing the historical data for each large power load. Form 345 should be prepared for each large commercial consumer in excess of 350 KVA billing demand and for each wholesale consumer.

3. Worksheet for developing data and estimates of large commercial loads under 350 KVA and over 350 KVA. This form is used in connection with summarizing the data for large power loads, analyzing the forms 345 and in arriving at estimates of future demands and energy consumption of the present and potential large power consumers.

4. Form 736, Comparative Annual Operating Data, is used to bring together data from Form 156, show average yearly growth in consumers and usage, by classification, for the past 10, five and two years, and is used to develop the forecast of consumers and their average monthly usage for the five and 10-year future period, and the average monthly usage for (1) the last 10 years, (2) the last five, and (3) the last two years. After the data is posted to this form and the averages are computed and entered, the forecast portion at the bottom of the form should be completed.

The number of consumers, by classification, should be projected to the nearest number divisable by 5, except large commercial, irrigation, street lighting, borrower's own use and sales for resale. KWH usage should be projected to the nearest 10 to 600 KWH/month; nearest 20 between 600 and 1,000 KWH/month; and nearest 40 above 1,000 KWH/month.

All annual KWH projections, except for irrigation, should be divisable by 12.

Large commercial consumers (over 350 KVA) and sales for resale should be handled as follows:

a. Tabulate data for each separate load and estimate them accordingly. Form 345 should be used as a basis for your estimate, modified by any justification for changing trends.

b. Subtract the total KWH shown on Form 345 from the total KWH usage for the large commercial class as shown on Form 156. Use the balance of the KWH to derive an average usage for the large commercials under 350 KVA and estimate them as a group. The growth of large commercials under 350 KVA should be in line with recent historical growth unless a deviation can be justified.

c. Limit any named potential large commercials (over 350 KVA) to those that are known or are under contract. Unnamed large commercials should be included, if there is substantial evidence to justify their inclusion.

5. Form 802a, Standard System Loss Curve, is a tabular form of the guideline curve of REA Bulletin 45-4, "Distribution System Energy Losses", and is used in estimating future system losses.

6. Form 344, Estimate of System Losses, is used to estimate system losses for determining the total power requirements. Instructions for its preparation and the sources of material are shown on the form.

7. Forms 4 and 4a, Entire System Loads Estimates, are used to assemble data from the various other forms developed as indicated above. Information for the past calendar year on Form 4 is derived from Form 156; the projections are from the bottom of Form 736.

8. Forms 341 and 341a, Summary of Consumers and KWH Estimates and Large Commercial, are the completed forecast of number of consumers, by classification, the average KWH consumption and the estimates of the total power requirements for the five and 10-year future period. They are the summary of material developed in the other forms, most of which serve primarily as worksheets.

9. Narrative report should be prepared to fully document the assumptions and considerations used in developing the PRS. All factors which were considered in making the forecasts should be explained in detail. Any significant variations from historical trends should be explained.

10. Forms 341, 341a and the narrative make up the formal PRS. A graph, on semi-logarithmic drawing paper, showing 11 years' historical data and the five and 10 future years' projection for the non-coincident system peak and the total power requirements (KWH), is also a part of the formal study (sample attached). These forms should be typed and assembled.

III. Procedures for Developing a PRS:

A. Power-Type Organizations and Their Member Distribution Systems

1. Power organization should inform its members and REA of the plans to initiate a revision, or the development, of the PRS's and may request assistance of a Power Requirements Officer.

2. The Power Requirements Officer, coordinating with the Area Office field personnel as necessary, will work with the power organization and its member systems as required during the development of the PRS's.

3. Each member system prepares Forms 733a, 342, 156, and 5, and a demand curve (as described above) and forwards such copies, along with any preliminary information regarding abnormal increases or decreases in growth, to the power organization.

4. Power organization will furnish each of its member systems with a five and 10-year projection of the members' total energy purchases and total KW demand to be used by the member as a guide in developing its forecast. These projections should be developed by calculating a curvilinear and/or logarithmic trend of each member's total energy as shown on the attached worksheets, Mathematical Trends of Power Use. Calculation of the trends should be based on historical KWH input to the member systems for the past 11 years immediately proceding the revision of the PRS, as shown on Forms 733a, 156, and 5, furnished by each member.

Adjustments to the historical data may be necessary because of abnormal increases or decreases. Similarly, using the historical data furnished by each member, the power organization will apply a load factor to the total energy projection to develop the projections of KW demand.

Power organization forwards a projection of demand and energy for the five and 10-year future period so developed to each member system, together with any recommendations for the members' consideration in developing their forecasts.

5. After receipt of the total KW and KWH projections and recommendations from the power supplier, each member will use the following forms, which require in-depth knowledge of the consumers and usage in the area, to develop its Power Requirements Study: Forms 343, 345, worksheet for large commercials, 736, 802a, 344, 4 and 4a, 341 and 341a, and narrative report.

6. If the forecasts of total KW demand and energy projections completed by the member system do not agree with the projections or with other recommended considerations supplied by the power organization, the member and the power organization, assisted by the Power Requirements Officer, should discuss and resolve their differences. Once agreements are reached the member system should readjust its PRS if needed.

7. Forms 341, 341a, and the narrative make up the formal PRS. A graph, on semi-logarithmic drawing paper, showing 11 years' historical data and the five and 10 future years' projection for the non-coincident system peak and the total power requirements (KWH), is also a part of the formal study (sample attached). These forms should be typed and assembled.

8. Each member should forward 12 copies of the formal PRS to the power organization. A copy of all back-up materials listed under the Instructions used to develop the study should also be forwarded.

9. The power organization, upon receipt and acceptance of the PRS reports from each of its member systems, should develop a consolidated PRS for its entire system, assisted by the Power Requirements Officer as required. The consolidated PRS and its report, as a minimum, consist of:

   a. A narrative report to include a discussion of assumptions, historical trends, deviations from those trends, diversities used and any information required to justify the estimates or to clarify any of the historical data or projections developed.

b. Consolidated KW and KWH requirements estimates, estrapolating for the 15-year future period, or as long as may be required, using the same compound percent - growth projected in the previous five-year period, and including the member systems' estimates and all loads imposed upon the power organization system.

c. Summary of individual non-beneficiary loads.

d. Study of any loads served directly by the power organization.

e. Summary of the consolidated PRS for all loads served, plus demand and energy losses.

f. Three-year graph of month-by-month non-coincident system peak.

g. Individual PRS for each member distribution system.

10. Upon clearance by the Power Requirements Officer, the power organization will forward six copies of its PRS and each member's PRS to REA for review and approval.

11. REA will review the PRS's and, if acceptable, indicate its approval to the power organization and each of its members.

12. The power organization and each member should then review the PRS with its board and obtain approval.

B. Individual Distribution Borrowers Not Members of Power-Type Organization

1. Distribution borrower will inform REA of its plans to initiate a revision of PRS and will request assistance of the Area Office field personnel.

2. Area Office field personnel will assist borrower in preparing and reviewing PRS as required.

3. The distribution borrower will develop a PRS for its system as follows:

a. The forms to be used and instructions for their preparation are shown in II A 1 through 5, II b, and II c 1 through 10 above.

b. Using historical growth during the 11 years immediately preceding the revision as shown on Forms 733a and 5, trend the total KWH input to the system. Adjustments to the historical data, prior to trending, may be desirable due to abnormal growth patterns. Trended projections for five and 10 future years should be used as a guide in arriving at the final PRS.

c. Six copies of the completed formal study, as outlined in III-A-7 above, should be submitted through the Area Office field personnel to REA for review and approval.

IV. Review and Follow-up:

A. It is the responsibility of each REA borrower (distribution and Power supply) to submit a revised basic PRS to REA for review and approval at least every three years. As discussed in III - Procedures for Developing a PRS above, PRS's for a power-type organization and its member distribution systems will be prepared at the same time.

B. Each borrower should compare the actual system growth each year with the PRS forecast estimates. Substantial differences may dictate a revision of the PRS within the basic three-year period. If a revision is considered necessary:

1. A distribution member of a power organization should discuss the proposed revision of its PRS with the Area Office field personnel. Seven copies of the revised PRS should be forwarded to the Area Office field personnel who will forward one copy to the power organization and six copies with supporting information to REA for review and approval.

2. A distribution borrower which is not a member of a power-type organization should discuss the proposed revision of its PRS with the Area Office field personnel. Six copies of the revised PRS with supporting information should be forwarded through the Area Office field personnel to REA for review and approval.

3. A power organization should discuss the need for a revision of its PRS with the Power Requirements Officer.

V. Special Power Supply Organizations:

These Instructions may not fully cover all types of power supply organizations, especially those organizations which have other power organizations as members. REA will consider these special power supply organizations on a case-by-case basis and assist on request to develop procedures to obtain fully-coordinated PRS's in these circumstances.

VI

Changes in Price and Rate Structures Effecting Demands

Basin Electric at this time is unable to provide an assessment of what effect changes in price and rate-structures would have upon demand.

VII

Pooling, Interconnection, and Exchange Agreements

Basin Electric Power Cooperative supports and encourages a coordinated regional plan to meet energy needs.

Following are examples of the Cooperative's involvement in regional coordination:

Missouri Basin Systems Group (MBSG)

In 1963, Basin Electric, along with over 100 other rural electric cooperatives and municipal electric systems in the Missouri River Basin, and the U.S. Bureau of Reclamation (USBR), formed the Missouri Basin Systems Group (MBSG) and established a Joint Transmission System (JTS). Through a contract called "the Pooling Agreement," MBSG members agreed to plan, pool and coordinate the use of power supply facilities required by individual members of the group. Membership in the MBSG is open to all USBR "preference customers." Non-members are continually informed of MBSG activities and encouraged to join the association so that all consumer-owned systems in the Missouri River Basin might have a direct voice in regional planning and pooling.

The Joint Transmission System today consists of approximately 8,000 miles of regional transmission lines. Operated by the Department of Energy's Western Area Power Administration (WAPA), this transmission system is jointly utilized by the consumer-owned systems and serves as the "backbone" of the regional power grid.

Under arrangements of a 35-year contract, Basin Electric pays the Federal government for leasing capacity in the JTS. These arrangements strengthen the region's electrical delivery system, minimize duplication of transmission facilities and result in savings to the Federal government and consumers.

Included in the JTS are Basin Electric's two 345 kilovolt (KV) transmission lines from the Leland Olds Station in North Dakota to the Western terminal substation at Watertown and Ft. Thompson, SD. Also included are the Leland Olds to Logan, ND 230 KV line, a Logan to Montana Dakota Utilities Company's Kenmare 115 KV substation and several 230/115 KV substations interconnecting the JTS.

Upon completion, the Cooperative's 345/500 KV line from the Antelope Valley Station to Huron, SD, and the Antelope Valley Station to Leland Olds 345 KV line, will also become part of the JTS.

Systems interested in joint planning indicate to MBSG their needs for future power and energy. These requirements are considered as part of the regional system as if they were the requirements of a single integrated utility system. Studies are conducted to indicate needs of the group. All factors, including the cost of capacity, fuel, water, pollution control facilities, financing and transmission to deliver the output where it is required are considered.

One of the primary activities of the MBSG is the Missouri Basin Power Project (MBPP), a program to meet the energy requirements of a number of MBSG members through the 1980s. Basin Electric will receive 42.27 percent or 697 megawatts of MBPP capacity.

The MBPP includes Laramie River Station, three 550 (net) MW generating units located in southeastern Wyoming. Unit 1 was declared commercial July 1, 1980, and Unit 2 July 1, 1981. The third unit is scheduled for commercial operation November 1, 1982.

MAPP

Basin Electric Power Cooperative participates on various committees which review the transmission adequacy and plans of area utilities as a function of the Mid-Continent Area Power Pool (MAPP). As a member of MAPP, Basin Electric will continue to purchase surplus capacity from the MAPP Pool in order to defer the addition of new generation. Basin Electric has been purchasing power from the MAPP system since 1976 and will continue to purchase power until its Antelope Valley Station, an 880,000 KW station presently under construction near Beulah, ND, can be placed in commercial operation. The first 440,000 KW unit is scheduled for completion in 1983 and the second 440,000 KW unit in 1985.

Interconnection and Common Use Agreement

Member cooperatives of Basin Electric have a common service area with Montana Dakota Utilities in the western half of North Dakota and a portion of Montana and South Dakota. In order to avoid the duplication of transmission facilities, an agreement was entered into on January 1, 1972, and provides for joint use and construction of transmission facilities. This agreement provides for studies to be performed every two years to determine what additional transmission will be required to meet area load growth. The agreement calls for the sharing of facilities on the basis of each utility's respective project loads.

The following facilities are a part of coordinated planning with Montana Dakota Utilities Company:

a) Leland Olds-Mallard 230 KV Line
b) Logan (ND)-Tioga (ND) 230 KV Line
c) Logan - Kenmare 115 KV Line
d) Bowdle - Ipswich 41.6 KV Line
e) Wishek (ND) Junction 230/115 KV Substation
f) Northwest Mandan (ND)-New Salem (ND) 115 KV Line
g) Medora (ND) 230/41.6 KV, 230/57 KV Substation
h) Dawson (ND) 230/41.6 KV Substation
i) New England (ND)-Mott (ND)-Elgin (ND) 115 KV Line
j) Bowman (ND) 230/41.6 KV, 230/57 KV Substation

In addition, as part of an agreement reached between Basin Electric and Saskatchewan Power Corporation (SPC) allowing for the seasonal exchange of up to 100 MW of electricity starting in the early 1980s, a 230 KV transmission line was built from Tioga, ND to Saskatchewan, Canada. This line was routed so that it can be tapped for future use by MDU and member systems of Basin Electric.

In addition to the above-mentioned groups Basin Electric currently is involved in pooling, interconnection and exchange agreements with the following:

a) Inland Power Pool - located west of the east-west ties.

b) Black Hills Power Company. (pages 26-30)

c) Nebraska Public Power District. (pages 30-31)

d) United Power Association. (page 36)

e) Western Area Power Administration. (pages 37-38)

Contracts for MBSG, MAPP, the Interconnection and Common Use Agreement with MDU, and the Inland Power Pool are contained in an exhibit book on file in the Energy Division of the Montana Department of Natural Resources and Conservation. Information on items "b" through "e" follows.

Contract for Electric Transmission Service between Black Hills Power and Light Company, Rushmore Electric Power Cooperative and Basin Electric Power Cooperative dated March 12, 1975

A) Nature of Obligations and Benefits:

This agreement provides for the construction of additional electric facilities needed by the parties to fulfill their respective utility responsibilities, to furnish transmission service for Rushmore for the term of the contract, and to provide for compensation to Black Hills.

This contract defines the contract path after the integration of delivery of electric power and energy by Black Hills for Rushmore to be from Stegall, Nebraska, to points of delivery of Black Hills' system to Rushmore South Dakota and Rushmore Wyoming. The integration of Black Hills' system into the interconnected western system allows alternative displacement paths of delivery in fulfillment of the defined contract path.

B) List of all Parties to the Agreement:

The agreement was executed between Black Hills Power and Light Company, Rushmore Electric Power Cooperative and Basin Electric Power Cooperative.

C) Time Period:

Within the meaning of this contract, the interim term is the period of time commencing at the time the Wyodak temporary sub-station is in operation and ending January 1, 1977. The term of this contract commenced May 19, 1975 and shall terminate 12:01 AM, May 1, 2007.

d) Amount of Electrical Energy:

The total delivery of power by Black Hills to Rushmore shall never

exceed 160,000 kilowatts of capacity without the mutual agreement of the parties regardless of the source of that power.

E) Specified Timing or Rate of Delivery or Receipt of Energy:

Energy adjustment during ultimate term: All energy, regardless of its source, to be delivered to Black Hills for delivery to Rushmore during the ultimate term, shall be adjusted for transmission and transformation losses under the following formula:

(1) Delivery at Wyodak with metering at 230,000 volts:

(a) During the period of time the Wyodak plant is in operation, the energy to be delivered to Black Hills shall equal the metered kilowatt hours times 1.02.

(b) During the time the Wyodak plant is not in operation, the energy to be delivered to Black Hills shall equal the metered kilowatt hours times 1.05.

(2) Delivery at Wyodak with metering at 69,000 volts:

(a) With the Wyodak plant in operation, the energy to be delivered to Black Hills shall equal (metered kilowatt hours times 1.01) times 1.02.

(b) With the Wyodak plant not in operation, the energy to be delivered to Black Hills shall equal (metered kilowatt hours times 1.01) times 1.05.

(3) For the purpose of the adjustment to be made in subparagraphs (1) and (2) in this section, the energy deemed to be delivered while the Wyodak plant is in operation shall be the same percentage of total kilowatt hours metered during a billing month as the percentage calculated by dividing the hours in the billing month during which the plant is in operation by the total hours in the billing month. The energy deemed to be delivered while the Wyodak plant is not in operation shall be

ther percentage of total kilowatt hours metered during a billing month as calculated by dividing the hours in the billing month during which the plant was not in operation by the total hours in the billing month.

(4) Where delivery of electric power and energy is delivered and metered at 230,000 volts at a location other than at Wyodak, the electric energy to be delivered to Black Hills shall equal the metered kilowatt hours times 1.05.

(5) Where electric power and energy is delivered at a location other than at Wyodak at 230,000 volts with metering at 69,000 volts, the electric energy to be delivered to Black Hills shall equal (the metered kilowatt hours times 1.01) times 1.05.

(6) Where the delivery of electric power and energy is at a place other than at Wyodak at 69,000 volts with metering at 69,000 volts, the electric energy to be delivered to Black Hills shall equal (the metered kilowatt hours times 1.01) times 1.07.

(7) Where electric power and energy is delivered by Black Hills at places other than Wyodak and at 69,000 volts, but with metering at a lower voltage, the electric energy to be delivered to Black Hills shall equal (metered kilowatt hours times 1.02) times 1.07.

F) Financial Agreements:

Compensation for transmission service for Rushmore's South Dakota members during interim term: Commencing with the date of this contract and continuing through the interim term of this contract, Rushmore shall pay Black Hills one mill per kilowatt hour adjusted

for losses delivered to Rushmore South Dakota as set forth in present contracts between Rushmore and Black Hills.

Compensation for transmission service to Rushmore Wyoming during interim term: No compensation shall be paid by Rushmore to Black Hills for delivery of electric power and energy to Rushmore Wyoming during the interim term of this contract.

Compensation to be paid by Basin Electric to Black Hills during ultimate term for transmission service to Rushmore South Dakota: During the utlimate term of this contract, Basin Electric shall pay to Black Hills one mill per kilowatt hour for all energy (regardless of source) delivered pursuant to this contract to Rushmore South Dakota (subject to loss adjustments herein provided) less the amount paid to Black Hills by the Bureau for the Bureau energy sold to Rushmore South Dakota and contractually delivered through Black Hills' system to Rushmore South Dakota.

Compensation to be paid by Basin Electric to Black Hills during ultimate term for Rushmore Wyoming transmission service: During the ultimate term of this contract, Basin Electric shall pay to Black Hills one mill per kilowatt hour for all energy associated with all of Rushmore Wyoming's load up to its first 150,000 kilowatts of demand (regardless of the energy's source, place of delivery, or who makes delivery); provided however, no compensation shall be paid Black Hills for energy delivered by the Bureau to Black Hills prior to January 1, 1986, for delivery to Rushmore Wyoming associated with a maximum demand of 4600 kilowatts. Compensation shall be adjusted for losses.

Compensation--Minimum payment: If the total amount to be paid by Basin Electric to Black Hills during any calendar year of the ultimate term of this contract is less than $500,000, Basin Electric

shall pay Black Hills an additional amount for that calendar year so that Black Hills has received a minimum payment of $500,000 annually during the ultimate term.

Compensation -- time of payment: Basin Electric shall pay Black Hills monthly within fifteen days of billing for actual energy metered during the billing month less the wheeling charge billed by Black Hills to the Bureau for Bureau power delivered by Black Hills to Rushmore for the same month. On each billing during April and October during the ultimate term, Basin Electric shall pay Black Hills an additional amount, if necessary, so that Black Hills has received the minimum amount up to the date of billing.

Adjustments for transmission and transformation losses: The adjustments for transmission and transformation losses in determining the amount of compensation to be paid by Basin Electric to Black Hills shall be as follows:

(1) With delivery at Wyodak or at Sundance at 230,000 volts, the compensation shall equal metered kilowatt hours times one mill.

(2) With delivery at any location where the power and energy is metered at 69,000 volts, the compensation shall equal (metered kilowatt hours times 1.01) times one mill.

(3) Where electric power and energy is delivered at a lower voltage than 69,000 volts, the compensation shall equal (metered kilowatt hours times 1.02) times one mill.

Compensation to be paid for Rushmore Wyoming's first 150,000 kW: The obligation of Rushmore to deliver electric power and Black Hills to furnish transmission service to Rushmore Wyoming is for all of Rushmore Wyoming's energy needs associated with the first 150,000 kilowatts of capacity needed by Rushmore Wyoming during the

ultimate term. If, for any reason, during the term of this contract, Rushmore or Rushmore Wyoming should contract power and energy regardless of source over some other contractual transmission path without mutual agreement of the parties for a part of all of the first 150,000 kilowatts of capacity and associated energy required by Rushmore Wyoming, Basin Electric as compensation for the obligations of Black Hills undertaken in this contract, shall still be obligated to pay Black Hills the compensation as set forth herein as if all of Rushmore Wyoming's first 150,000 kilowatts of capacity and associated energy needs were being delivered under the provisions of this contract for the entire term.

Transmission Service Contract between Nebraska Public Power District and Basin Electric Executed April 29, 1977

A) Nature of Obligations and Benefits:

The District shall transmit through its Bulk Transmission System, power for Basin Electric in the amount of 500 MW from the east side unit of the Laramie River Station. Basin Electric will provide a contribution in aid of construction for this transmission of power.

B) List of all Parties to the Agreement:

Basin Electric, acting as Project Manager and Operating Agent for the Missouri Basin Power Project and on its own behalf, and as agent for the participants of the Project, namely Basin Electric Power Cooperative, Bismarck, North Dakota; City of Lincoln, Nebraska; Heartland Consumers Power District, Madison, South Dakota; Western Minnesota Municipal Power Agency, Ortonville, Minnesota; Tri-State Generation and Transmission Association, Inc., Denver, Colorado; and the Wyoming Municipal Power Agency, Lusk, Wyoming; (all six together herein referred to as "Participant"), have entered into this agreement with Nebraska Public Power District.

C) Time Period:

This contract was executed April 29, 1977 and shall continue in force until December 31, 2040.

D) Amount of Electrical Energy:

The District will receive power for Basin Electric in the amount of 500 MW. If the net capability of the east side unit is in excess of 500 MW, the District agrees to receive such net capability, but in no event shall the amount of power exceed 550 MW.

E) Specified Timing or Rate of Delivery or Receipt of Energy:

The District's obligation to transmit power shall commence September 1, 1980. The delivery of power by the District to the Points of

Delivery shall be limited to the amount specified in the "Points of Delivery" indicated on page 34.

F) Financial Agreement:

In recognition of the long-term nature of this contract, Basin Electric has agreed to pay a contribution in aid of construction for bulk transmission service which is estimated at $51,591,700. This contribution shall be deemed a credit against the charges for the annual cost of the bulk transmission service.

Transmission Service Contract Between
Nebraska Public Power District and Basin Electric Power Cooperative

POINTS OF DELIVERY

One Point of Delivery shall be comprised of the points of interconnection between Nebraska Public Power District and Joint Transmission System for delivery of up to 300 MW*, less losses, to Heartland Consumers Power District, Basin Electric Power Cooperative, and Western Minnesota Municipal Power Agency:

1. At Hinton, Iowa, where the District's 230 kV Hinton - Twin Church transmission line connects to the USBR Sioux City (Hinton) substation 230 kV bus.
2. At Belden, Nebraska, where the USBR 115 kV Gavins Point - Belden transmission line connects to the District's Belden substation 115 kV bus.
3. At Gavins Point Substation, South Dakota, where the District's 115 kV Gavins Point - Neligh transmission line connects to the USBR Gavins Point substation 115 kV bus.
4. At O'Neill, Nebraska, where the USBR 115 kV Ft. Randall - O'Neill transmission line connects to the District's O'Neill substation 115 kV bus.
5. At Mission, South Dakota, where the District's 115 kV Mission - Valentine transmission line connects to the USBR Mission substation 115 kV bus.
6. At Ft. Randall substation, South Dakota, where the District's 230 kV Ft. Randall - Columbus transmission line connects to the USBR Ft. Randall substation 230 kV bus.

*Subject to pro rata adjustment based on Article II.

Electric Service Agreement between Basin Electric and United Power Association dated January 10, 1968

A) Nature of Obligations and Benefits:

This agreement allows Basin Electric and UPA to derive additional benefits from the interconnection of their systems by the purchase, sale or interchange of various classes of power and energy. These include: Breakdown on Emergency Service, Start-up and Maintenance Energy Service, Interchange of Energy, General Purpose Energy, and Temporary Firm Power.

B) List of all the Parties to Agreement:

The Electric Service Agreement was executed between Basin Electric Power Cooperative and United Power Association.

C) Time Period:

The Agreement was executed January 10, 1968 and shall continue in effect until September 24, 1986.

D) Amount of Electrical Energy:

All deliveries of power and energy by either party are scheduled in advance, emergencies expected.

E) Specified Timing or Rate of Delivery or Receipt of the Energy:

Each class of power and energy is scheduled according to the needs of day-to-day operation.

F) Financial Agreements:

Each class of service scheduled shall be itemized and accounted for separately. Breakdown on Emergency Service shall be either:

(1) by mutual agreement, returned to the supplier kilowatt hour for kilowatt hour under substantially similar load conditions as when delivered, as scheduled pursuant to Paragraph 1.03, or

(2) paid for at the rate of four mills ($0.004) per kilowatt hour.

Start-up maintenance energy service shall be delivered at the rate of four mills ($0.004) per kilowatt hour.

Interchange of energy delivered shall be returned kilowatt hour for kilowatt hour at existing points of interconnection at times and rates scheduled. For settlement purposes, interchange energy has a net value of three mills ($0.003) per kilowatt hour.

General purpose energy shall be at a rate of three mills ($0.003) per kilowatt hour.

Temporary firm power will be negotiated at the time of purchase.

Interconnection Agreement between Basin Electric and United Power Association dated September 24, 1966

A) Nature of Obligations and Benefits:

Basin Electric and UPA expect benefits through the interconnection of their respective systems by operating in a manner set forth in the agreement. UPA and Basin Electric provide their respective 230 kV substation facilities required to terminate their interconnecting facilities.

B) List of all Parties to the Agreement:

The Interconnection Agreement was executed between UPA and Basin Electric.

C) Time Period:

The agreement was executed September 24, 1966 and shall continue in effect for a period of 20 years.

D) Amount of Electrical Energy:

(1) The parties agree to normally operate their steam electric generating plants in the vicinity of Stanton, North Dakota, interconnected. As a result of such interconnected operation, there may be inadvertent flows of power and energy from the system of one party through the system of the other party.

E) Specified Timing or Rate of Delivery or Receipt of the Energy:

Each party agrees that during such periods of inadvertent flow, the input of electric power and energy into the other party's system shall at all times be approximately equal to the amount of electric power and energy withdrawn therefrom.

F) Financial Agreements:

Any unintentional delivery of power and energy by either party to the other shall be returned and balanced out as soon as practicable in accordance with procedures established by the Operating Committee.

Joint Transmission System and Mutual Services Contract between Basin Electric and the U.S. Bureau of Reclamation -- Western Area Power Administration (WAPA)

A) Nature of Obligations and Benefits:

This agreement provides the following:

(1) The establishment of a "Missouri Basin Systems Group Pooling Agreement". The MBSG makes engineering studies concerning the location, size, time of installation of thermal generating facilities for the purpose of coordinating such installations for the maximum benefit of all the participating systems. The MBSG also conducts annual operational studies to determine if the Joint Transmission System is adequate to carry the power requirements of the MBSG for the following three years.

(2) The establishment of a "Joint Transmission System" which is composed of certain high voltage transmission lines and associated substations. The JTS provides a transmission grid for members of the MBSG so they can receive power and energy generated at the hydroelectric generating plants of the USBR or by electric generating facilities in the area constructed and operated by other parties of the MBSG. At the present time, Basin Electric has the rights to deliver about 1,000,000 kW to our members over the JTS.

(3) Provides for the sale of peaking power to Basin Electric from the hydroelectric generating resource of the USBR.

(4) Provides for 179 MW operating reserves for Basin Electric's Leland Olds Units No. 1 and 2 from the hydroelectric generating resources of the USBR.

B) List of all parties to agreement:

The contract was executed between Basin Electric Power Cooperative and the U.S. Bureau of Reclamation.

C) Time Period:

The Agreement was executed November 29, 1962 and shall continue in effect until December 31, 2001. Supplements 1,2,4,5,6 and 7 are in effect until December 31, 2001.

D) Amount of Electrical Energy: Supplement No. 3

The USBR is obligated under Supplement 3 to provide 280 MW of firm peaking power for each winter season from 1978/79 until December 31, 1989.

E) Specified Timing or Rate of Delivery of the Energy:

All deliveries of peaking power during the winter season shall commence with the November billing period and terminate with the April billing period.

F) Basin Electric currently pays the WAPA approximately $11.86 per kw/yr for capacity in the Joint Transmission System for power generated and delivered from Basin Electric's resources for Leland Olds #2 and other resources, and $6.59 per kw/year for capacity rights in the JTS for Leland Olds #1. Basin Electric is currently paying the USBR $7.20 per kw/season for the 280 MW of firm winter peaking power and must return the energy to the USBR at mutually agreeable times.

VIII

Efforts To Minimize Environmental Impacts

In accordance with the provisions of the Montana Major Facility Siting Act, Basin Electric is following the prescribed procedures in the planning for potential future electric generating facilities and transmission systems in Montana.

In 1979 and early 1980, Basin Electric representatives conducted an information program in order to insure that the appropriate state agencies and the general public of Montana were informed of our plans for potential coal-fired generating facilities that may be constructed in Montana in the late 1980's. This project is Basin Electric's Sunrise Project.

Representatives of Basin Electric met with those Montana state agencies (see list Page 40) potentially concerned with the siting of a major power facility and distributed copies of a study identifying 25 potential sites in the Midwest for future base-load generation for Basin Electric. Of the 25 potential sites, three were singled out as preferred areas. The site under consideration in Montana is in the Circle area.

Public information meetings as part of the scoping process on the Sunrise Project were held during 1979 and 1980 to allow state agencies and the general public early involvement in the project. Public information meetings are required by regulations of the Council on Environmental Quality (CEQ).

Basin Electric has consistently placed care for the region's social and physical environment as a high priority.

All projects proposed by Basin Electric are accompanied by a detailed impact assessment. Compiled through an open planning process which includes local input, impact assessments identify all impacts which may have an effect on the physical and social environment. Once all potential impacts have been identified, mitigation strategies are developed with regulatory agencies and/or concerned citizen groups.

All of Basin Electric's facilities meet Federal and state air and water quality pollution control standards.

Since 1977 the Cooperative has been involved in the development of a new dry desulfurization process for coal-fired power plant emissions.

Recognizing the advancement which the Cooperative has made in the area of dry scrubbing, the Environmental Industry Council and the President's Council on Environmental Quality in 1980 presented Basin Electric an Award of Excellence in Air Pollution Control for outstanding technological achievement and leadership in all areas of pollution abatement.

Sunrise Project Montana Contacts

Department of Fish and Game

Department of Health and Environmental Sciences

Department of State Lands

Environmental Quality Council

Department of Agriculture

Office of Commerce and Small Business Development

Department of Natural Resources and Conservation

Department of Highways

State Historical Society

Department of Community Affairs

Department of Public Service Regulation

Montana Trade Commission